

REMARKS

Reconsideration of the subject application in view of the present amendment is respectfully requested.

By the present amendment, Claims 10-12 have been canceled. Claims 1 and 23 have been amended.

Based on the foregoing amendments and the following remarks, the application is deemed to be in condition for allowance, and action to that end is respectfully requested.

The Examiner rejected claims 1 and 3-58 under 35 U.S.C. § 102 (e,e,e,b,b,b) as being anticipated by, respectively, any of Stehr, U.S. Patent No. 6,227,824 (Stehr), Husar et al., patent publication No. 2004/0166028 (Husar), Raz et al., U.S. Patent No. 6,323,040, Johnson, U.S. Patent No. 4,077,845 (Johnson), Kricka et al., U.S. Patent No. 5,744,366 (Kricka), and Polaschegg et al., U.S. Patent No. 4,508,622 (Polaschegg). It is respectfully submitted that claims 1, 3-9, and 13-58 are patentable over the cited references.

The present invention, as defined by claim 1, relates to a system for handling liquid samples that may be used for proportioning liquids, i.e., receiving and delivering defined liquid volumes like a pipetting or dispensing

system, especially for loading of microtitration plates or gel or electrophoretic plates.

The device for handling liquid samples takes up and delivers liquid samples through the outwardly leading mouth. As the device for handling liquid samples which is substantially of a tongue shape and is tapered towards the mouth, it can easily be introduced into narrow receptacles and take up small volumes of liquid, samples, the proportioning error, due to adhesion of sample to the surface of the device, being minimized. Between take-up and delivery, the liquid sample is stored in the well of the device. The device for handling liquid samples can be releasably mounted so that it can be replaced after one or several proportionings by a new device for handling liquid samples. Different from the known pipette tips made from plastic, the device for handling liquid samples may have very small structures which can be produced at low cost and with high precision so that an economical proportioning of very small liquid samples is possible with increased accuracy.

Filling and emptying of the device with liquid sample is controlled by the handling apparatus. For this, the handling apparatus is provided with a displacement device which is sealingly connected to the passage of the device for handling liquid samples. The displacement device controls proportioning by

displacement of an air column similar to the pipetting process of an air cushion pipette. For rapid and easy replacement of the device for handling liquid samples, the handling apparatus is provided with a device for releasable mounting the device for handling liquid samples.

The system recited in claim 1 is not disclosed or suggested in the prior art, including all of the prior art of record in this application. Considering the prior art, Stehr discloses a fluid pump which is provided with an inlet and an outlet and an integrated displacement device (displacer 12). The pump transports liquid only in a single direction from the inlet to the outlet. The pump is not provided with a device for releasable mounting a device for handling liquid samples. The pump is not a system for handling liquid samples that includes a device for handling liquid samples which can be releasably mounted to a handling apparatus having a displacement device. The pump does not have a tongue shape and a mouth in a first end side.

Husar discloses, in Figures 3 and 10-11, liquid handling systems provided with a device for handling liquid samples 27, 70 and a handling device 32, 72. In Figure 3, the device for handling liquid samples 27 is provided with a micro-diaphragm pump 4 which is electrically connectable via electric contacts 29 and 35 to proportioning control means 19 of handling apparatus 32.

In Figure 11, the device for handling liquid samples 70 is provided with an actor 76 which bears against a diaphragm of the proportioning port 8. In device 70, proportioning port 71 is arranged in an end of proportioning chip 68 without taper. In both embodiments, the device for handling liquid samples 27, 70 is provided with a reservoir 1, 64. Pump 4 respectively proportioning chip 68 pumps liquid only in one direction from reservoir 1, 64' to proportioning port 8, 71, but not in the reverse direction.

Both embodiments do not comprise a device for handling liquid samples without displacement device, and a handling apparatus provided with a displacement device. Moreover, a device for handling liquid samples based on superposed and interconnected planar elements having a tongue shape and a tapered end provided with a mouth in an end side thereof, is not disclosed in Husar.

Finally, the handling apparatus of the system of Figure 10 to 12 is provided with an actuator which is distinct from the claimed system for handling liquid samples according to Office action of August 27, 2004.

Both Raz and Johnson disclose a biological specimen preparation system a self-contained rehydratable microtiter type device which are filled with

samples of external proportioning devices. The preparation system and microtiter type device do not have tongue shape and a mouth in a first, tapered end side.

Kricka discloses a device to facilitate the rapid, accurate analysis of a sample having cells characterized by their motility. According to Figure 1, a test sample is introduced by a delivery apparatus 110, such as a pipette or syringe, via an inlet port 16a into the device 10. The displacement device is not sealingly connected to a passage of the device 10. It is not possible to take up liquid into the device through a mouth separate from inlet port 16a of device 10 under control of the displacement device. The device 10 does not have tongue shape with a tapered end and a mouth provided in the end side.

Polaschegg discloses a dialysis apparatus with regulated mixing of the dialysis solution which apparently does not have any of novel features recited in claim 1.

In view of the above, it is respectfully submitted that the present invention, as defined by claim 1, patentably defines over the prior art, and claim 1 is allowable.

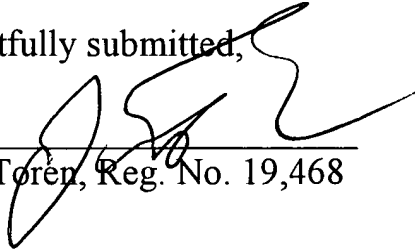
Claims 3-9 and 13-58 depend on claim 1, directly or indirectly and are allowable as being dependent on an allowable subject matter.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance, and allowance of the application is respectfully requested.

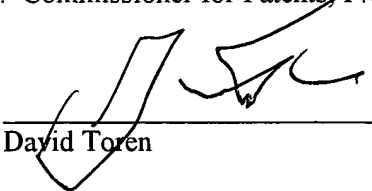
Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place the case in condition for final allowance, it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Respectfully submitted,


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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail and addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 14, 2005.


David Toren